Montana Fish, Wildlife & Parks

August 17, 1998

1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
- Fisheries Division
- Endangered Species Coordinator
- Nongame Coordinator
- Billings Office

Montana State Library
MT Environmental Information Center
Montana Audubon Council
Sweet Grass County Conservation District
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
Montana State Library, Helena
State Historic Preservation Office, Helena
Rita Esp, Esp Ranch, Highway 10 East, Big Timber, MT 59011
Tom Chambers, T&B Whitetail Ranch, East of Big Timber, Big Timber, MT 59011

Ladies and Gentlemen: Chambers Spring Creek

Please find enclosed an Environmental Assessment prepared for a Future Fisheries Project tentatively planned to restore fish habitat on a small unnamed spring creek located 10 miles east of the town of Big Timber. This proposal calls for removal of two fish migration barriers and restoration of a degraded stream channel to provide approximately 1,200 feet of spawning and rearing habitat for trout that reside in the mid-Yellowstone River.

Please submit any comments that you have by 5 P.M., September 18, 1998 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this proposed project is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division

Sweet grass

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Esp/Chambers Spring Creek Restoration Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 which directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purposes of improving wild fisheries. The legislature established a funding account to help accomplish this goal. This project is being proposed to restore a small spring creek located approximately 10 miles east of the town of Big Timber to provide 1,200 feet of spawning and rearing habitat for trout that reside in the mid-Yellowstone River. The project also proposes to create fish passage to the spring creek for fish that reside in the Yellowstone River.

I. Location of Project: This project will be conducted on a small unnamed spring creek located approximately 10 miles east of the town of Big Timber within Township 1 North, Range 15 East, Section 35 in Sweet Grass County (see Attachment 1).

II. Need for the Project: Department Goal A indicates that a Fisheries Division objective is to "protect existing aquatic habitat and improve degraded stream systems for the welfare of healthy fish populations and other wildlife species and for public enjoyment and use." The Future Fisheries Improvement Program is a tool to help achieve that objective.

The project proposes to create new spawning and rearing habitat for trout in a small spring creek with a base flow of approximately 5 cubic feet per second. Currently, this small spring creek provides no spawning or rearing opportunity for trout residing in the mid-Yellowstone River due to two barriers located near the mouth of the stream. The first barrier is created by a steep drop (approximately 4 feet when the river is at base flow) over the river bank as the stream enters the Yellowstone River. The second barrier is created by a partially plugged and undersized culvert located about 40 feet upstream from the first barrier. Additionally, upstream of the second barrier, the stream channel is in a degraded condition due to deposition of fine sediment as a result of the impoundment created behind the undersized culvert. The stream channel also is in a degraded condition as a result of livestock overuse within both the riparian corridor and the head of the spring.

Trout populations in the Yellowstone River within the vicinity of Big Timber appear to be recruitment limited. Providing migrant spawners access to 1,200 feet of new spawning and rearing habitat would act to increase recruitment to the river.

III. Scope of the Project:

The proposal calls for removing two barriers to fish migration and restoring the degraded stream channel. The first barrier would be eliminated by constructing a series of step pools using large rock. The second barrier would be removed by replacing an undersized and partially plugged culvert with a culvert of sufficient diameter and appropriate grade to pass flow and bedload. The

degraded channel would be restored by removing the partial dam from the channel (replacing the undersized culvert), removing in-channel sediment, reconstructing the channel to create a more natural meander pattern with appropriate pool/riffle spacing, installing off-stream watering tanks for livestock water, planting woody riparian vegetation within the riparian corridor and installing riparian fencing along the entire length of the stream. The project is expected to cost $28,046.00. Of this total, the Future Fisheries Improvement Program would be contributing up to $11,600.00.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment:

1. Terrestrial and aquatic life and habitats.

The creation of approximately 1,200 feet of new spawning and rearing habitat for trout should enhance recruitment of juvenile fish to the Yellowstone River. Removal of fish migration barriers and restoration of the spring creek channel would improve aquatic habitat by providing fish passage, creating diverse pool/riffle habitat and reducing sedimentation. Restoration of the riparian corridor through the planting of woody shrubs and through installation of fencing would improve habitat for riparian dependent wildlife species.

2. Water quantity, quality and distribution.

Short term increases in turbidity will occur during project construction. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the stream channel will be minimized to the extent practicable. A permit for a short term exemption from turbidity will be obtained from the Water Quality Bureau and a 310 permit will be obtained from the local Conservation District. In the long term, protecting the riparian corridor from overgrazing and creating a bypass around livestock corrals would reduce the contribution of sediment and nutrients to downstream areas, thereby improving the overall quality of the spring creek and the Yellowstone River.

3. Geology and soil quality, stability and moisture.

No effects on geology and soils are expected above the high water mark. Below the high water mark, the project is expected to create a more stable stream channel. Sediment removed from the channel would be placed on newly created point bars and re-vegetated. Riparian fencing would act to protect stream banks from being overgrazed and trampled by livestock.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover would be improved by creating a more stable stream

channel, placing seed and trans-planting sod on the disturbed stream banks, and planting shrubs along the stream corridor. The riparian corridor would be protected from overgrazing by the installation of fencing.

5. Aesthetics.

Aesthetics would be enhanced by restoring a degraded reach of stream to a more healthy and natural stream environment. A 1,200 foot reach would be restored by returning the channel to a free flowing stream, creating proper channel meanders and pool/riffle spacing and bypassing some heavily used livestock corrals. The riparian vegetative community would be enhanced through transplants of sod and seeding, planting shrubs and fencing the corridor to eliminate overgrazing by livestock.

7. Unique, endangered, fragile, or limited environmental resources

The Yellowstone River contains Yellowstone cutthroat trout, a species of special concern in Montana. This proposed project would create approximately 1,200 feet of new spawning and rearing habitat for Yellowstone cutthroat trout. As a result, the project is expected to enhance recruitment of juvenile cutthroat trout to the Yellowstone River.

9. Historic and archaeological sites

The proposed project will likely require an individual Army Corp of Engineers (COE) 404 permit. Therefore, the State Historic Preservation Office has been contacted to determine the need for compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment.

7. Access to & quality of recreational activities.

It is anticipated that restoration of this small spring creek would improve overall aquatic habitat and, as a result, would improve recruitment of trout to the Yellowstone River. As a result, the recreational fishery in the river would be expected to be improved.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, a 1,200 foot reach of an unnamed spring creek will remain degraded and fish passage will continue to be blocked. As a result, the spring creek will remain barren of fish and the potential to provide spawning and rearing habitat will remain undeveloped. Trout residing in the mid-Yellowstone will remain recruitment limited. In addition, habitat for riparian dependent wildlife will remain in a degraded condition. Recreational opportunities associated with fish and wildlife resources will remain reduced

and aesthetics will continue to be impaired.

2. The Proposed Alternative

The proposed alternative is designed to remove two migration barriers to fish, restore the stream channel to appropriate hydrologic dimensions, and improve the riparian vegetative community through planting of woody shrubs and through fencing the corridor to prevent overgrazing by livestock. These activities would create a more diverse habitat for aquatic life and riparian dependent wildlife. This alternative would improve fish and wildlife habitat, aesthetics and water quality within the project area and would be expected to increase trout populations both in the stream and the Yellowstone River.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

   We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

   The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on the Montana Electronic Bulletin Board.

3. Duration of comment period?

   Public comment will be accepted through 5 P.M. on September 18, 1998.

4. Person responsible for preparing the EA.

   Mark Lere, Program Officer
   Habitat Protection Bureau
   Fisheries Division
   Montana Department of Fish, Wildlife and Parks
   1420 East 6th Avenue
   Helena, MT 59620

   Telephone: (406) 444-2432

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Esp/Chambers Spring Creek Restoration Project

Division/Bureau Fisheries Division -Future Fisheries Improvement

Description of Project The project is being proposed to restore a small spring creek located approximately 10 miles east of the town of Big Timber to provide approximately 1,200 feet of new spawning and rearing habitat for trout that reside in the mid-Yellowstone River.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats		X				X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Sweet Grass County Conservation District, NRCS, Army Corp

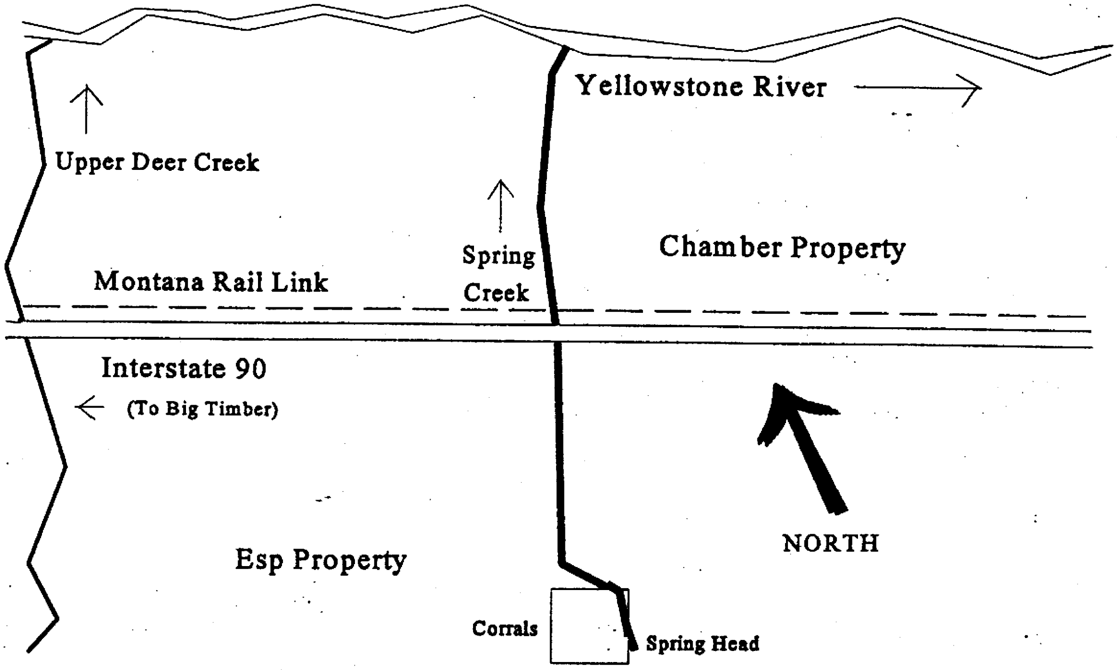
of Engineers

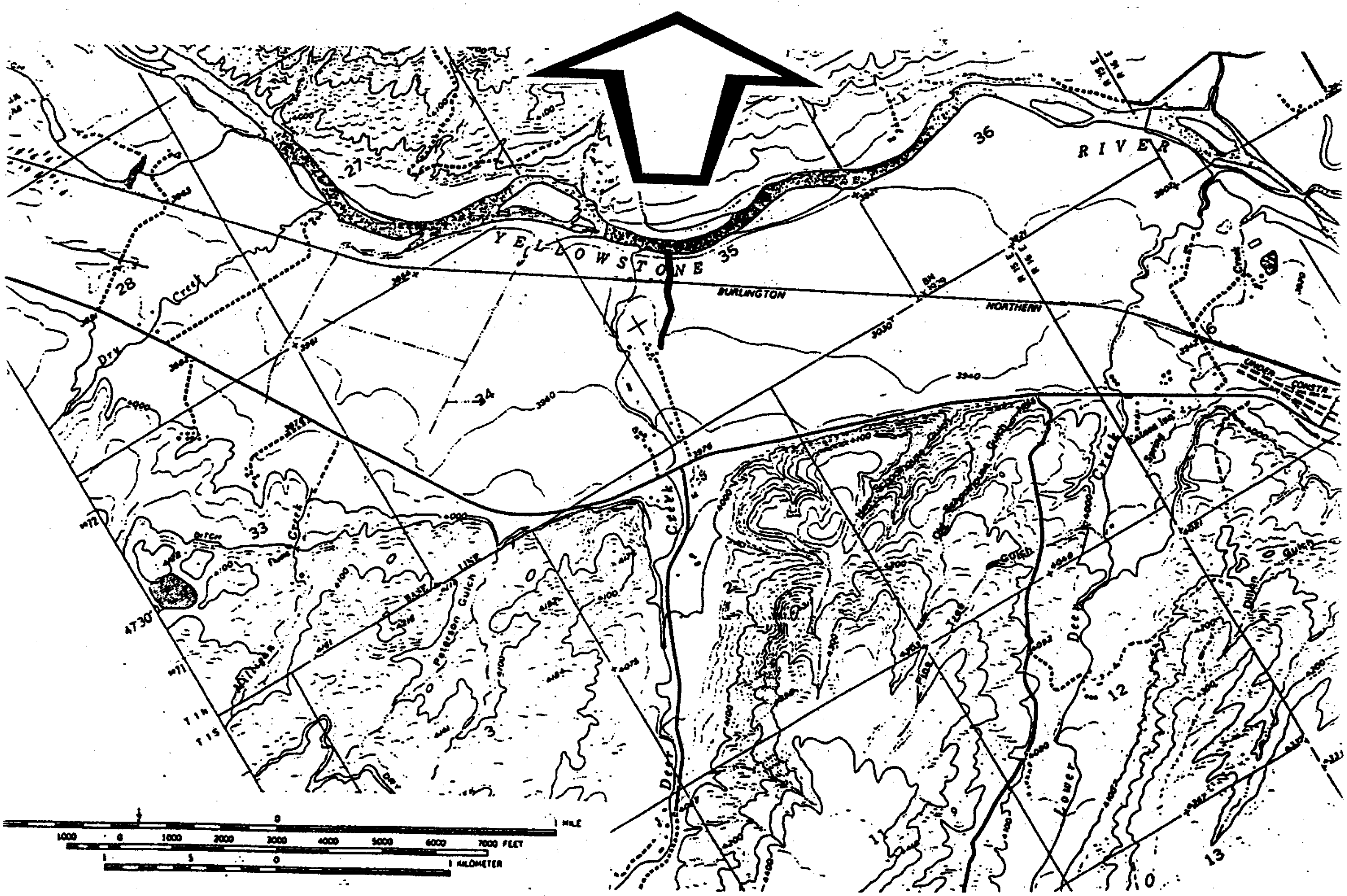
Individuals or groups contributing to this EA: Chuck Roloff, NRCS; Confluence Consulting, Inc.

Recommendation concerning preparation of EIS: No EIS required.

EA prepared by : Mark Lere

Date: August 17, 1998





ATTACHMENT 1